Bruhat Bengaluru
Mahanagara Palike

BRUHAT BANGALORE MAHANAGARA PALIKE
YELAHANKA ZONE

1st &FINAL E-BILL

Name of work:- Construction of RO Plant at Harohalli Village in Chowdeshwari ward no-02 of Yelahanka Sub division

Agency:- SRI.SAMBASHIVA, No:04,3rd Main Road, Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

Estimate Cost:-27.00 Lakh's

JOB CODE NO:-002-23-000011

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Agency:-SRI.SAMBASHIVA,No:04,3rd Main Road,Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

Measurements Taken On:-

S. No	Description of work	Unit	No.	Measurements L	B	D	Qty	Rate	Amount
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. Depth exceeding 1.5m, but not exceeding 3 m								
		Cum							
	Quantity Vide As Per Pre Measurement are Prepared in Excel Sheets of E-Bill						38.15		
							38.15	176.87	6747.59
2	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications.								
		Cum							
	Quantity Vide As Per Pre Measurement are Prepared in Excel Sheets of E-Bill						1.49		
							1.49	2276.22	3389.29
3	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates.Specification								
		Cum							
	Quantity Vide As Per Pre Measurement are Prepared in Excel Sheets of E-Bill						4.60		
							4.60	4936.4	22687.69
4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) Mix 1:2:4 (M15) Using 20 mm nominal size graded crushed coarse aggregates								
	Foundation:-Long Wall	Cum	2	6.80	0.60	0.10	0.82		
	Short Wall		2	3.70	0.60	0.10	0.44		
							1.26	5226.14	6584.94
5	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand)								
		Cum							

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	Quantity Vide As Per Pre Measurement are Prepared in Excel Sheets of E-Bill						9.45		
							9.45	4756.86	44952.33
6	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.								
	Filling Available of Excavated Earth								
	Earth Work Excavation	Cum	Qty Vide From 01				38.15		
	(-)Deductions:-								
	PCC for Footing		Qty Vide From 03				4.60		
	Filling in foundation with granite / trap broken metal		Qty Vide From 02				1.49		
	SSM Footing		Qty Vide From 05				9.45		
	Footing Concrete Quantity						3.46		
							18.99		
							19.16	181.32	3473.91
7	**Loading and Unloading of Stone Boulder/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 14 m3)**								
	Excavated Earth	Cum					38.15		
	Filling Available of Excavated Earth						19.16		
							18.99	65.77	1249.04
8	Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km								
		t.Km		18.13		1.28	23.20		
							23.20	85.32	1979.64
9	Providing and laying in position Reinforced cement concrete for all **Sub structures of building**, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) **M25** Design Mix Using 20 mm nominal size graded crushed coarse aggregates								
	Footings	Cum	6	1.20	1.20	0.40	3.46		
	Plint Beam		2	6.20	0.25	0.45	1.40		
			3	4.20	0.25	0.45	1.42		
	For sump								
	Bottom slab		1	2.40	2.40	0.30	1.73		
	Sump walls		2	2.40	0.20	2.00	1.92		
			2	2.00	0.20	2.00	1.60		
							11.52		
		Limited To Schedule B Qty					11.39	5751.75	65512.43
10	Providing and laying in position Reinforced cement concrete for all **Super structures of building** , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) **M25 Design Mix** Using 20 mm nominal size graded crushed coarse aggregates								
	Column below plinth	Cum	6	0.50	0.50	0.85	1.28		
	Columns		6	0.20	0.45	2.10	1.13		
							2.41	6047.93	14569.46

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11	**Slab**								
	Sump Cover slab	Cum	1	6.20	5.50	0.18	6.14		
			1	2.40	2.40	0.18	1.04		
							7.17		
		Limitef To Schedule B Qty					**7.10**	6597.74	46843.95
12	**Beams**								
	Long Wall	Cum	2	6.20	0.20	0.60	1.49		
	Short Wall		3	4.20	0.20	0.60	1.51		
	Columns Below Beam		6	0.20	0.45	0.40	0.22		
	Above Roof		6	0.20	0.45	0.80	0.43		
							3.65	6597.74	24068.56
13	**Lintel**								
	Long Wall	Cum	2	6.20	0.20	0.20	0.50		
	Short Wall		2	4.20	0.20	0.20	0.34		
							0.83	6597.74	5489.32
14	Providing Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)								
		Kg,s							
	Quantity Vide As Per Pre Measurement are Prepared in Excel Sheets of E-Bill						3087.43		
							3087.43	85.32	263419.10
15	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x200x200mm having block density more than 1800kg/m3 and minimum compressive strength of 4.00 N/mm2 conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications.								
	Ground Floor								
	Long Wall	Sqm	2	6.20		2.55	31.62		
	Short Wall		2	4.25		2.55	21.68		
							53.30		
	(-)Deduction								
	Rolling Shutter		1	2.70		2.70	7.29		
	Long Wall		2	6.20		0.20	2.48		
	Short Wall		2	4.20		0.20	1.68		
	V		2	1.20		1.20	2.88		
	Columns		6	0.45		2.55	6.89		
							21.22		
							32.08		
		Limited To Schedule B Qty					**31.35**	1063.00	33325.05
16	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x150x200mm having block density more than 1800kg/m3 and minimum compressive strength of 4.00 N/mm2 conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications.								
	Parapet wall	Sqm	2	6.20		0.90	11.16		
			2	5.10		0.90	9.18		
	Steps		2	2.85	0.55		3.14		
			1	2.85	0.25		0.71		
							24.19	943.02	22809.30

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17	Providing 20 mm cement plaster of mix :1:4 (1 cement: 4 fine sand) to brick/stone masonary including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge								
	External Plastering								
	Long Wall	Sqm	2	6.40		3.60	46.08		
	Short Wall		2	5.40		3.60	38.88		
	parapet wall		4	6.20		0.90	22.32		
			4	5.10		0.90	18.36		
	Parapet Wall Upper Face		2	6.20	0.23		2.85		
			2	5.10	0.23		2.35		
							130.84		
	(-)Deduction								
	Rolling Shutter	0.50	1	2.70		3.00	4.05		
	V	0.50	2	1.20		1.20	1.44		
							5.49		
							125.35	265.75	**33311.23**
18	Providing 18 mm cement plaster in two coats under layer 12 mm thick cement plaster with cement mortar 1:5 (1 cement : 5 coarse sand) and a top layer 6 mm thick cement plaster with cement mortar 1:3 (1 cement: 3 coarse sand) finished rough with sponge to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
	Internal Plastering								
	Long Wall	Sqm	2	5.80		2.10	24.36		
	Short Wall		2	4.25		2.10	17.85		
							42.21		
	(-)Deduction								
	Rolling Shutter	0.50	1	2.70		3.00	4.05		
	V	0.50	2	1.20		1.20	1.44		
							5.49		
							36.72		
		Limited To Schedule B Qty					**34.65**	286.19	**9916.48**
19	Providing 12mm thick cement plaster in floating coat of neat cement of mix :1:4 to Brick masonry including rounding off corners wherever reduired smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per diredtion of Engineer-in-charge								
	Ceiling:-Room	Sqm	1	5.80	4.25		24.65		
	Projection Rooof		1	6.20	0.90		5.58		
	Long Wall		2	5.80		0.85	9.86		
	Short Wall		2	4.25		0.85	7.23		
							47.32	232.87	**11018.24**
20	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete as per specifications and as per directions of Engineer in charge.								
	Ground Floor								
	for Internal plastered portions	Sqm	1	same as Internal			34.65		
	ceiling		1	same as plastering for			47.32		
							81.97	73.77	**6046.56**
21	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :Two coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								

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	Internal painting	Sqm	Same as Internal plastering				81.97		
							81.97	115.54	**9470.24**
22	Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two coat applied @ 1.67 ltr/10 m² over and including priming coat of exterior primer applied @ 2.20 kg/10 m²) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
	External painting								
	Ground Floor	Sqm	Same as External plastering				125.35		
							125.35	120.88	**15152.07**
23	Providing and laying Cement concrete flooring 40 mm thick with 20mm nominal size stone aggregate using 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry complete-								
	Flooring	Sqm	1	5.75	4.10		23.58		
	Terrace		1	5.75	4.10		23.58		
							47.15	355.32	**16762.77**
24	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) Mix 1:2:4 (M15) Using 20 mm nominal size graded crushed coarse aggregates,								
	Flooring	Cum	1	5.75	4.10	0.10	2.36		
	Terrace		1	5.75	4.10	0.10	2.36		
							4.72	5226.14	**24641.25**
25	Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing , curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge. ** Polished Granite stone slab Black, Cherry Red, Brown, Cat Eye, River Pink or equivalent.								
	Flooring	Sqm	1	6.00	4.45		26.70		
	Steps:-Thread		2	2.90	0.30		1.74		
			1	2.70	0.25		0.68		
	Rise		2	2.90		0.15	0.87		
							29.99	2550.86	**76487.54**
26	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate sections and other sections of approved make conforming to IS: 733 and IS:1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately) Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron) including cost of materials, labour, usage charges of machinery complete as per specifications.								

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	Window	Sqm	2	1.25		1.25	3.13		
	Door		1	2.90		2.70	7.83		
							10.96		
				(10.96 Mtr X 12 KG)			131.46		
		Limited To Schedule B Qty					108.00	412.5	44551.08
27	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-incharge: Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side including cost of materials, labour, usage charges of machinery complete as per specifications.								
		Sqm	2	3.00		1.70	10.20		
							10.20	711.93	7261.69
28	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to openings / wooden frames with rawl plugs screws etc.								
	V	Kg	2.00			32.81	65.62		
			(1.25*1.25*21kg)				65.62		
		Limited To Schedule B Qty					9.45	141.32	1335.47
29	Providing & fixing of louvered ventilator made out of multi chambered UPVC(Matching to RAL-9016) sections and with minimum TiO2(Titanium Dioxide) at 6PHR with TPE(Thermo Plastic Elastomer) and lead free with gaskets - grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the ventilator frame. The frame having overall size of 39mm x 39mm with GI reinforcement of 1mm thickness. Louver clip in Aluminium (powder coated in white) will be used on the frame along with plastic parts for fixing the 4 mm pin head glass. Wall thickness of frame shall be 2mm.Maximum possible size – 1000mm x 1000mm. (The cost is inclusive of all fixtures and separate charges for minor T&P's shall not be made).								
	V	Sqm	2	1.25		1.25	3.13		
		Limited To Schedule B Qty					0.45	4328.46	1947.81
30	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two coat applied @ 0.90 ltr/10 m² over an under coat of primer applied @ 0.80 ltr/10 m² of approved brand and manufacture including preparing the surface after thorougly cleaning oil, grease, dirt and foreign matter, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
	For window and ventilators Grills	sqm		ventilator qty			0.45		
							0.45	94.21	42.39
31	Providing and laying water proofing treatment to the Roof with PU based single component elastomeric pure polyurethane based coating on New terrace/Chajjas/Sunken portion of WC:Bathroom, cold applied PU waterproofing membrane that is highly elastic with elongation greater than 400% and tensile strength greater than 2MPa as per ASTM D412. The waterproofing membrane to be applied in 2coats @ 1.6kg per m2 to achieve final DFT (dry film thickness) of 1mm including prime coat of epoxy primer @150 g per m2 and protection with 120gsm Geo-textile over the waterproofing membrane. The finished cost to include surface preparation, making coving at Junction, Bore Packing, treatment of construction joints completely as per specification & with a 10 years warranty on product & work from certified manufacturers as per the direction of the Engineer In charge.								
	Terrace	Sqm	1	7.40	6.40		47.36		
							47.36	662.16	31359.90
32	Providing and laying water proofing treatment to the Water tanks & Liquid Retaining structures with two component acrylic polymer modified cementitious waterproofing membrane with minimum elongation of 50% applied @ 1.5 kg/m2 for internal side waterproofing in two layers with waiting period of 4-6 hrs per layer and food grade epoxy coating in two coats certified by CFTRI Mysuru, including surface preparation completely as per specification & with a 10 years warranty on product & work from certified manufacturers as per the direction of the Engineer In charge.								

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	For sump								
	Bottom slab	Sqm	1	2.40	2.40		5.76		
	Sump walls	Sqm	2	2.40		2.00	10.00		
		Sqm	2	2.00		2.00	10.00		
	Cover slab	Sqm	1	2.40	2.40		5.76		
							31.52	404.40	**12746.69**
33	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x0.90 mm M.S. laths with 0.90 mm thick top cover including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
	Rolling Shutter	Sqm	1	2.90		3.00	8.70		
			1	3.00		3.00	9.00		
							17.70	2230.89	**39486.75**
34	Providing and placing on terrace(at all floor levels), polyethylene water storage tanks as per IS 12701 marked,with cover and suitable locking arrangement and making necessary holes for inlet,outlet and overflow pipes but without fittings and the base support for tank(For 1000 litre capacity)								
	Syntex Tank	Ltr	1000				1000.00		
							1000.00	7.11	**7110.00**
35	Supplying and installation of 3000 LPH RO drinking water treatment plant comprising of raw water strorage tank,anti rolling closing system with pump & tank sand filler activated carbon filter,High pressure pump,R.O membranes,R.O.Pressure Tubes, Skid house the complete R.O plant,control panel,Chemical cleaning tank,Ph dosing system with pump and dosing tank product water storage UV Sterilizer Interconnecting piping with SKID,complete instrumentation with necessary gauges and flow indicator as required in the plant with PH meter etc...								
		Nos.	1				1.00		
							1.00	848400.00	**848400.00**
36	PTMT grating 100 mm dia.								
	Grating	Nos.	2				2.00		
							2.00	14.22	**28.44**
37	Providing and fixing brass bib cock of approved quality : 20 mm nominal bore								
	Bib Cock	Nos.	2				2.00		
							2.00	306.64	**613.28**
38	Providing and fixing brass stop cock of approved quality : 20 mm nominal bore								
	Stop Cock	Nos.	2				2.00		
							2.00	306.64	**613.28**
39	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete : 20 mm nominal bore								
	Valve	Nos.	2				2.00		
							2.00	319.97	**639.94**
40	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete. (Concealed work including cutting chases and good the walls etc.,) 20mm nominal dia pipes								
	Pipe	Mtr	1	20.00			20.00		

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							20.00	331.52	6630.40
41	Providing and fixing on wall face unplasticised rigid PVC rain water pipes conforming to IS:13592 Type A, including jointing with seal ring conforming to IS:5382, leaving 10mm gap for thermal expansion, [i] single socketed pipes 100mm diameter								
	Rain Water pipes	Mtr	1	8.00			8.00		
							8.00	224.87	1798.96
42	Supply and delivery of Centrifugal pumpset at site brand new best make and with discharge duty confirming to ISI standards and its latest amendments2 HP, Size 50x40 Head 22M, Discharge 186 LPM								
	Motor	Each	1				1.00		
							1.00	15527.34	15527.34
43	Open conduit System: Supplying heavy gauge PVC conduit pipe .....dia confirming to IS 2509 with suitable size bends, plugs in case of RCC ceiling and RCC wall stone structure or rawl plugs in case of brick walls and cement plastering damaged portion using heavy gauge saddles at an interval of 700mm using WF screws.a) 19/20mm dia 2mm thick								
	Pipe	Mtr	1	20.00			20.00		
							20.00	54.94	1098.80
44	Supplying and flush mounting teak wooden box without front plank, made of not less than 15mm thick wood, after due groove cutting, necessary masonry patch work complete. d)8''x6''x3''(203x152x76mm)								
		Each	4				4.00		
							4.00	60.60	242.40
45	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materials a) Short point upto 3Mtr from tapping point to out let via switch								
		Point	1				1.00		
							1.00	223.01	223.01
46	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materials b) Medium point above 3Mtr upto 6Mtr from tapping pointr to out let via switch.								
		Each	1				1.00		
							1.00	311.89	311.89
47	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materialsc)Long point above 6Mtr upto 10Mtr from tapping point to out let via switch								
		Each	2				2.00		
							2.00	458.14	916.28
48	Supplying 6A flush/projected type socket and a 6 amps flush/ projected type SP switch either surface/flush mounting in a exisiting gang box or in a 4mm thick plastic sheet and fixing over a flush mounted wooden box and wiring using necessary capacity wires as required. b) 6Amps 3/5 way								
		Each	1				1.00		
							1.00	115.54	115.54

Asst. Executive Engineer
Yelahanka SUD. Divison
(BBMP) Yelahanka Zone
Yelahanka, Bangalore

49	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.a) 1.5 sqmm,								
	Pipe	Mtr	1	20.00			20.00		
							20.00	21.01	420.20
50	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.b)2.5Sqmm								
	Pipe	Mtr	1	15.00			15.00		
							15.00	32.32	484.80
51	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.c) 4 sqmm								
	Pipe	Mtr	1	25.00			25.00		
							25.00	47.67	1191.75
52	Supplying 4mm thick plastic sheet with necessary niches for fixing switches, regulators etc., and fixing on exisiting wood or metal box using N.F.screws								
		Sq cm	1500				1500.00		
							1500.00	0.23	345.00
53	Supplying and fixing pbbc bakelight stright or slant batton holderand wiring within 60v/230volts lamp group A								
		Each	4				4.00		
							4.00	71.10	284.40
54	Supplying and fixing retrofit type -PL-LED lamp...W LED linear Source with CCT 6500 degree K, CRI>70%efficacy>80 lumen per watt,life>25000 burning hours and compliance to IS 10322/IEC 60598,LM 79 and LM80.The LED are driven by HF electronicdriver integrated in the system, with PF>0.95, power loss Should <5% of lam Wattage.,short Circuit and open circuit Protection to be integrated Circuit, THD less than 20%,life as per LM79.the operating input voltage should be between130 t 275 volts.Tested by NABL/CPRI accredited laboratory with 2 years Warranty agnist any manufacturing defect working under standard electrical condition.18-20Watts								
		Each	1				1.00		
							1.00	558.33	558.33
55	Supply wall mountaing fan suitable to operate of single phase -230v A.C supply 400mm sweep a.group A								
		Each	1				1.00		
							1.00	2293.10	2293.10
56	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source.								
		Each	1				1.00		

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Yelahanka, Bangalore

							1.00	2950.01	2950.01
57	Supplying and fixing of T5 Fluorescent Tube with 14W power consumption with low 3mg Mercury content & below 40% glass content than T8 lamp & 20% less phosphor coating than T8 with initial lumen on 1350 (for 3000-6500 deg Kelvin), rated Avg life (12 Hr. Cycle) of greater than 35000 burring hours. Operating voltage range from 180V to 265V, 50Hz AC power Supply								
		Each	5				5.00		
							5.00	106.66	533.30
58	Supply and fixing polished wood board made of not less than 15mm thick plank on both sides with plank made out of not more than 2 pices and fixing the same to the wall using tapered inverted woode plug screws etc., a) 20"x20"2.5"								
		Each	4				4.00		
							4.00	254.52	1018.08
59	Supplying and fixing of Procelain fuse channel with cut out on exisiting wooden/panel using necessary nuts, bolts and washers etc., complete.a) 32Amps								
		Each	6				6.00		
							6.00	161.60	969.60
60	Supply of an load charge over switches 4poles 415v 50Hz A.C supply with AC23A duty a) up to 63amps Groups A								
		Each	1				1.00		
							1.00	4189.48	4189.48
61	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and C type curve indicator ON/OFF Energy cross 3 with short circuit breaking capacity of 10K and complete wiring as required. e)6-32amps TPN . Group A								
		Each	1				1.00		
							1.00	1938.39	1938.39
62	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and C type curve indicator ON/OFF Energy cross 3 with short circuit breaking capacity of 10K and complete wiring as required. 6-32amps TPN Group A								
		Each	3				3.00		
							3.00	1435.82	4307.46
63	Supplying, fixing and wiring Electronic Trivector Meter (ETV) 5 to 32/63 A three phase 4 wire whole current class-1 Accuracy Energy Meter.								
		Each	1				1.00		
							1.00	4141.00	4141.00
64	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipments on the meter board using 40mm dia 2.90 thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proprotion of salt and charcoal 150mm alround the pipe to complete depth. the connection form the pipe to the conduit etc, is to be established through GI wire of size as oer ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and checknuts etc, the pipe shall have 16 through holes of 12mm dia								
		Nos.	4				4.00		
							4.00	2423.19	9692.76
65	Supplying and running of GI/Copper strips for grounding connections using necessary fixing material as required GI strip 25x3mm								
		Mtr	1	20.00			20.00		
							20.00	60.60	1212.00

Asst. Executive Engineer
Yelahanka Sub Divison
(BBMP Ynk. Zn)
Yelahanka, Bang...

66	Supplying of LT UG cable having aluminium conductor PVC insulated, sheathed, galvanished, steel wire/steel tap armoured cable with PVC outer sheating 1.1 KV class.I. Class 'A' PVC Cable.d) 4 core 16 sqmm								
		Mtr	1	16.00			16.00		
							16.00	121.20	**1939.20**
67	Labour charges for lying of 1.1 KV class UG cable when supplied agency in existing trench Gl pipe / stoneware pipe / on wall /on pole as required. I. In existing trench/duct.a) 6 sqmm to 16 sqmm								
		Mtr	1	15.00			15.00		
							15.00	9.60	**144.00**
68	Digging of trench of 0.6 m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc.,complete. .a) In soil (ordinary)								
		Mtr	1	20.00			20.00		
							20.00	61.41	**1228.20**
69	Supplying and fixing of class A (medium duty) Gl pipe of wall thick ness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV class. a) 40mm								
		Mtr	1	15.00			15.00		
							15.00	270.68	**4060.20**
70	Supplying &fixing L.T.cast iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers ect.b) 16 Sqmm								
		Each	5				5.00		
							5.00	218.16	**1090.80**
71	Providing BESCOM deposits excuding ESCOM 3 pahse energy meter (as per intimation letter from ESCOMS) for 10hp 3phase power supply under LT-5 tariff.								
		L.S	1				1.00		
							1.00	8080.00	**8080.00**
								SubTotal Rs	**1845981.38**
								Add 18% of GST Rs	**332276.6**
								Grand Total Rs	**2178258.02**

CERTIFICATE:

1) Certified that the above work done is satisfactory completed.
2) Certified that the there is no debries have been cleared to site.

Assistant Engineer
Ward No-02

Asst. Executive Engineer
Assistant Executive Engineer
Yelahanka Sub Division
(BBMP Ynk. ZO)
BBMP
Yelahanka, Bangalore

Bruhat Bengaluru Mahanagara Palike

BRUHAT BANGALORE MAHANAGARA PALIKE
YELAHANKA ZONE

PRE-MEASUREMENTS

Name of work:- Construction of RO Plant at Harohalli Village in Chowdeshwari ward no-02 of Yelahanka Sub division

Agency:- SRI.SAMBASHIVA, No:04,3rd Main Road, Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

JOB CODE NO:-002-23-000011

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Name of work:- Construction of RO Plant at Harohalli Village in Chowdeshwari ward no-02 of Yelahanka Sub division

Agency:-SRI.SAMBASHIVA,No:04,3rd Main Road,Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

Pre Measurements Taken On:-

S. No	Description of work	Unit	No.	Measurements			Qty	Remarks
				L	B	D		
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. Depth exceeding 1.5m, but not exceeding 3 m							
	Footings	Cum	6	1.20	1.20	1.50	12.96	
	Foundation:-Long Wall		2	6.80	0.75	0.90	9.18	
	Short Wall		2	3.70	0.75	0.90	5.00	
	Sump		1	2.50	2.50	1.80	11.25	
							38.39	
		Limited To Schedule B Qty					38.15	

Assistant Engineer
Ward No-02

Asst. Executive Engineer
Yelahanka Sub Division
(BBMP)
Yelahanka, Bangalore

Examined
A.E.E

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Name of work:- Construction of RO Plant at Harohalli Village in Chowdeshwari ward no-02 of Yelahanka Sub division

Agency:-SRI.SAMBASHIVA,No:04,3rd Main Road,Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

Pre Measurements Taken On:-

S. No	Description of work	Unit	No.	Measurements			Qty	Remarks
				L	B	D		
2	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications.							
	Footings	Cum	6	1.20	1.20	0.10	0.86	
	Sump		1	2.50	2.50	0.10	0.63	
							1.49	

A.E.E

Assistant Engineer
Ward No-02

Assistant Executive Engineer
Yelahanka Sub Division
BBMP

Asst. Executive Engineer
Yelahanka Sub. Divison
(BBMP Ynk. Zn)
Yelahanka, Bangalore

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Name of work:- Construction of RO Plant at Harohalli Village in Chowdeshwari ward no-02 of Yelahanka Sub division

Agency:-SRI.SAMBASHIVA,No:04,3rd Main Road,Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

Pre Measurements Taken On:-

S. No	Description of work	Unit	No.	Measurements			Qty	Remarks
				L	B	D		
3	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates.Specification							
	Footings	Cum	6	1.20	1.20	0.15	1.30	
	Foundation:-Long Wall		2	6.80	0.75	0.15	1.53	
	Short Wall		2	3.70	0.75	0.15	0.83	
	Sump		1	2.50	2.50	0.15	0.94	
							4.60	

A.E.E

Assistant Engineer
Ward No-02

Asst. Executive Engineer
Yelahanka Sub. Divison
(BBMP Thk. Zn)
Yelahanka, Bangalore

Assistant Executive Engineer
Yelahanka Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Name of work:- Construction of RO Plant at Harohalli Village in Chowdeshwari ward no-02 of Yelahanka Sub division

Agency:-SRI.SAMBASHIVA,No:04,3rd Main Road,Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

Pre Measurements Taken On:-

S. No	Description of work	Unit	No.	Measurements L	B	D	Qty	Remarks
14	Providing Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)							
		Kg						
	Footing,s:-Main & distrubution Rods 12 mm Dia (0.12c/c)	6	32	1.80	345.60			
					345.60	0.89	307.58	
	Columns:-Main & distrubution Rods 20mm Dia (0.15c/c)	6	6	5.40	194.40			
					194.40	2.42	470.45	
	Stirrupps 8mm Dia(0.20c/c)	6	29	1.35	234.90			
					234.90	0.39	91.61	
	Plinth Beam:-Main Rods 20mm Dia(0.15c/c)	2	4	7.00	56.00			
		3	4	5.00	60.00			
					116.00	2.42	280.72	
	16mm Dia(0.15c/c)	2	2	7.00	28.00			
		3	2	5.00	30.00			
					58.00	1.58	91.64	
	Stirrupps 8mm Dia(0.20c/c)	2	31	1.50	93.00			
		3	20	1.50	90.00			
					183.00	0.39	71.37	
	Lintel:-Main Rods 10mm Dia(0.15c/c)	2	6	7.00	84.00			
		2	6	5.00	60.00			
					144.00	0.62	89.28	
	Stirrupps 8mm Dia(0.20c/c)	2	31	1.05	65.10			
		2	20	1.05	42.00			
					107.10	0.39	41.77	
	Beam:-Main Rods 20mm Dia(0.15c/c)	2	2	7.00	28.00			
		3	2	5.00	30.00			
					58.00	2.42	140.36	
	16mm Dia(0.15c/c)	2	4	7.00	56.00			
		3	4	5.00	60.00			
					116.00	1.58	183.28	
	Stirrupps 8mm Dia(0.20c/c)	2	31	1.35	83.70			
		3	20	1.35	81.00			
					164.70	0.39	64.23	

Checked
Recommended
A.E.E

Asst. Executive Engineer
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(BBMP Ynk. Zn)
Yelahanka, Bangalore

	Roof Slab:-Main Rods 10mm Dia(0.12c/c)	1	53	5.50	291.50			
	Extra Rods	1	36	5.50	198.00			
	Additional Rods	1	106	0.90	95.40			
					584.90	0.62	362.64	
	8mm Dia(0.15c/c)	1	35	6.10	213.50			
	Extra Rods	1	12	6.10	73.20			
	Additional Rods	1	70	2.00	140.00			
					426.70	0.39	166.41	
	Sump:-Main Rods 12mm Dia (0.12c/c)							
	Outer Rods	1	44	6.60	290.40			
	Inner Rods	1	37	6.00	222.00			
					512.40	0.89	456.04	
	Alround Distrubutions:-10mm Dia(0.20c/c)	1	11	10.80	118.80			
		1	10	9.80	98.00			
					216.80	0.62	134.42	
	Slab:-Main Rods 12mm Dia(0.15c/c)	1	38	2.65	100.70			
					100.70	0.89	89.62	
	Distrubutions:-10mm Dia(0.20c/c)	1	28	2.65	74.20			
					74.20	0.62	46.00	
							3087.43	

c&fc
Ramjeel
A.E.E

Assistant Engineer
Ward No-02

Assistant Executive Engineer
Yelahanka Sub. Divison
(BBMP Ynk. Zn)
Yelahanka, Bangalore

Assistant Executive Engineer
Yelahanka Division

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Name of work:- Construction of RO Plant at Harohalli Village in Chowdeshwari ward no-02 of Yelahanka Sub division

Agency:-SRI.SAMBASHIVA,No:04,3rd Main Road,Chamundeshwari L/O Doddabommasandra,Vidyaranyapura, Bangalore-560097.

Pre Measurements Taken On:-

S. No	Description of work	Unit	No.	Measurements			Qty	Remarks
				L	B	D		
5	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand)							
	Foundation:-Long Wall	Cum	2	6.80	0.60	0.75	6.12	
	Short Wall		2	3.70	0.60	0.75	3.33	
							9.45	

Assistant Engineer
Ward No-02

Assistant Executive Engineer
Yelahanka Sub Division

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A.E.E